INTEGRATED ASPIRATOR AND FAN SHROUD

Abstract of the Disclosure

A fan shroud having an integrated aspirator is provided comprising an upper section and a lower section. The upper section and lower section are designed to mateably engage one another so as to form an air passage between a fan and a cooling module of a vehicle. The upper section of the shroud includes an air duct formed by a channel in the shroud and a similar channel in a duct cover so that when the duct cover is mated to the upper section of the shroud a passage is created. A first end of the passage terminates at an aperture disposed in an end of shroud situated proximal to the fan. A second end of the passage curves upwardly to a nozzle provided on the top side of the duct cover. A pre-cleaner unit having an air intake and an air exhaust is aspirated through an aspirator port. When the pre-cleaner is mounted to the shroud, the aspirator port is disposed in the nozzle of the duct cover. The aspirator port is thus in communication with the air duct and the shroud aperture. The vacuum necessary for proper aspiration of the pre-cleaner is provided by air movement, induced by the fan, between the air intake of the pre-cleaner and the shroud aperture via the aspirator port and air duct. Because the pre-cleaner is fitted directly to the air duct, no additional aspirator hoses or clamps are necessary and considerable space is conserved under the vehicle hood.